ASSIGNMENT 3

Textbook Assignment: "Photographic Quality Assurance," "Electronic Imaging," and "Aerial Photography." Pages 2-29 through 4-1.

Learning Objective (continued) : Recognize factors that may affect a process-control chart.

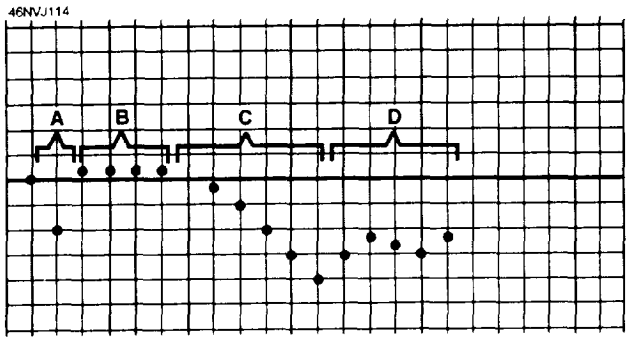

FIGURE 3A

IN ANSWERING QUESTION 3-1 THROUGH 3-4, REFER TO FIGURE 3A.

3-1. What segment represents a jump?

1. A
2. B
3. C
4. D

3-2. What segment represents a random pattern?

1. A
2. B
3. C
4. D

3-3. What segment represents a trend?

1. A
2. B
3. c
4. D

3-4. What segment represents a run?

1. A
2. B
3. c
4. D

3-5. You have just processed a control strip and the high-density reading plots above the upper-control limit. What action should you take first?

1. Check the calibration of the densitometer
2. Conduct a complete chemical analysis
3. Stop the process and change the chemicals
4. Review the chemical-mixing records

Learning Objective: Recognize procedures used in a color process-monitoring program.

3-6. What is the recommended temperature for storing color control strips?

1. 68°F to 75°F
2. 50°F to 68°F
3. 0°F to 32°F
4. 0°F or below

3-7. The manufacturer processes the reference strip that is included with each package of color control strips.

1. True
2. False

3-8. You are establishing a color process-monitoring chart. After processing five control strips, you read and average your data. Your readings exceed the aim values provided by the manufacturer but fall within the action limits. What action should you take?

1. Null the densitometer
2. Arbitrarily adjust the data so it falls on the mean
3. Apply the adjustment tolerances provided by the manufacturer
4. Disregard the data and process, read, and average five more control strips

3-9. One of your color process-monitoring charts indicates the past several plots are consistently drifting away from the aim value. Which of the following publications should you consult?

1. The Photo-Lab Index
2. Chapter 2 of this training manual
3. The appropriate process-monitoring manual
4. OPNAVINST 5290.1

Learning Objective: Identify various components of an electronic-imaging system.

3-10. Electronic imaging has what advantage(s) compared to conventional photography?

1. Images can be viewed faster
2. It is environmentally friendly
3. Images may be transmitted rapidly
4. All of the above

3-11. What component is the "brain" of a computer?

1. The keyboard
2. The CPU
3. The monitor
4. The software

3-12. What type of computer system is used in electronic imaging?

1. Special purpose
2. Graphical interface
3. Imaging specific
4. General purpose

3-13. What are the two major components of a computer system?

1. Hardware and software
2. CPU and output
3. Input and output
4. Peripherals and software

3-14. Of the following programs, which one is NOT application software?

1. WordPerfect
2. Adobe Photoshop
3. DOS
4. Harvard Graphics

3-15. Which of the following components is NOT a section of a CPU?

1. Control
2. Driver
3. Internal storage
4. Arithmetic logic

3-16. In a computer system, what component is used for primary storage?

1. Hard drive
2. Floppy disk
3. CPU
4. Magnetic tape

3-17. The electronic circuits etched on a silicon chip are known by what term?

1. Bit cell
2. Integrated circuitry
3. Large-scale integration
4. Input/output

3-18. Semiconductor storage does not possess which of the following advantages?

1. High reliability
2. Non-volatility
3. Low power consumption
4. Fast internal-processing speeds

3-19. What are the two classifications of primary storage?

1. Internal and external
2. Magnetic and floppy
3. ROM and RAM
4. Permanent and temporary

3-20. What type of memory is the working memory in a computer system?

1. RAM
2. ROM
3. WORM

Learning Objective: Identify methods in which information is transferred throughout a computer system.

3-21. Of the following peripherals, which one is an output device?

1. Keyboard
2. Scanner
3. Mouse
4. Monitor

3-22. Which of the following peripheral devices is connected to a simplex channel?

1. Keyboard
2. Scanner
3. Mouse
4. Printer

3-23. The signals that communicate information to control the back-and-forth flow of information between peripheral devices are known by what term?

1. Handshake
2. Stoppers
3. Interface
4. Controllers

3-24. What device is used to transmit data over long distances by converting digital signals to audio signals and vice versa?

1. Serial port
2. Communication port
3. Translator
4. Modem

Learning Objective: Recognize various uses of software.

3-25. What type of systems software controls the execution of other programs?

1. Assembler
2. Operating
3. Utility
4. Driver

3-26. What type(s) of systems software is/are used as language translators?

1. Assemblers Only
2. Compilers only
3. Assemblers and compilers
4. Utilities

3-27. What term describes software written to perform a specific function?

1. Systems
2. Application
3. Designer
4. Task specific

Learning Objective: Identify factors that affect the resolution of an electronic-imaging system.

3-28. What is the smallest picture element displayed on a computer monitor?

1. Raster
2. Byte
3. Bit
4. Pixel

3-29. What primary factor determines resolution of an electronic image?

1. The software
2. The number of pixels in a specific area
3. The color of the image
4. The brightness of the monitor screen

3-30. One advantage of electronic-imaging technology is that resolution is standardized for all input and output devices.

1. True
2. False

3-31. The process used to determine time when converting an analog waveform into a digital signal is called

1. digitizing
2. A/D conversion
3. sampling
4. quantitizing

3-32. The conversion of continuous values into distinct numeric values is called

1. digitizing
2. A/D conversion
3. sampling
4. quantitizing

3-33. What term(s) is/are used to describe the result of the combined process of sampling and quantitizing?

1. Digitizing
2. A/D conversion
3. Both 1 and 2 above

3-34. What term is used to describe the low, objectionable resolution of an electronic image on a display system?

1. Pixelation
2. Breakup
3. Softness
4. Grain

Learning Objective: Recognize characteristics of still-electronic cameras.

3-35. What factor is primarily responsible for the resolution capability of an electronic camera?

1. The storage medium
2. The camera interface
3. The speed of the lens
4. The size of the CCD

3-36. In the field mode, a still-video camera uses (a) what number of tracks per image and (b) can record what maximum number of images on a floppy disk?

1. (a) One (b) 25
2. (a) Two (b) 50
3. (a) One (b) 50
4. (a) Two (b) 25

3-37. In the frame mode, a still-video camera uses (a) what number of tracks per image and (b) can record what maximum number of images on a floppy disk?

1. (a) One (b) 50
2. (a) Two (b) 25
3. (a) One (b) 25
4. (a) Two (b) 50

3-38. A still-video camera uses what type of signal to record images?

1. Digital
2. Analog
3. VHF
4. UHF

3-39. Which of the following statements pertaining to still-video technology is NOT true?

1. Images must be converted from an analog to a digital format
2. Images require less memory than a still-digital image
3. It provides the lowest resolution of any of the electronic cameras
4. Images are captured directly in a digital format

3-40. Which of the following statements pertaining to still-digital technology is NOT true?

1. Images must be converted from an analog to a digital image
2. Images require more memory compared to still-video images
3. Images captured have higher resolution compared to still-video images
4. Images are captured directly in digital format

3-41. How does the effective focal length of the Kodak DCS compare to a conventional 35mm camera?

1. The effective focal lengths are identical
2. The effective focal length of the DCS is one-half of a conventional 35mm camera
3. The effective focal length of the DCS is twice that of a conventional 35mm camera
4. The effective focal light of the DCS is four times that of a conventional 35mm camera

Learning Objective: Identify characteristics of various peripheral devices used in electronic imaging.

3-42. What type of scanner is capable of providing the highest image quality?

1. Rotary drum
2. Flatbed
3. Film

3-43. What term(s) is/are used for images displayed on the screen of a computer monitor?

1. Bit mapped
2. Pixel oriented
3. Raster
4. All of the above

3-44. In reference to a computer monitor, what does the term "pitch" represent?

1. The size of the screen
2. The overall color cast of the displayed image
3. The size of a single pixel
4. The contrast of the displayed image

3-45. On a color CRT screen, what three colors compose a single pixel?

1. Yellow, magenta, and cyan
2. Black, yellow, and blue
3. Black, cyan, and yellow
4. Red, green, and blue

3-46. What term is used for the duplication of information in a digital file?

1. Redundancy
2. Compression
3. Reoccurrence
4. Repetition

3-47. As the compression ratio increases, what happens to the quality of the image?

1. It increases
2. It decreases
3. It remains the same

3-48. What maximum compression ratio can be used to provide a lossless compression?

1. 5:l
2. 2:l
3. 3:l
4. 4:l

3-49. What configuration(s) is/are used to pass information from the computer to the printer to ensure the image is placed properly on the paper?

1. RIP
2. PDL
3. Either 1 or 2 above
4. JPEG

3-50. On a thermal-dye transfer printer, a continuous-tone image is created in what way?

1. By blending gaseous color dyes released by donor ribbons and transferring them to the print material
2. By spraying dyes on the print material and then heating the dyes to make them permanent
3. By a series of tiny dots that are blended by heating the print material
4. By dye pigments in the print material that are released when heated

3-51. What type of printer provides the highest quality continuous-tone color image?

1. Inkjet
2. Color copier
3. Thermal-wax transfer
4. Thermal-dye transfer

3-52. When you are using graphical user-interface software, what element(s) of hardware is/are essential?

1. A mouse
2. A bit-mapped display
3. Both 1 and 2 above
4. A film scanner

3-53. When images are manipulated in the editing stage, changes to the original image can be detected readily on hardcopy?

1. True
2. False

Learning Objective: Identify the types of aerial photography. (This objective is continued in assignment 4.)

3-54. What does the acronym TARPS represent?

1. Total Air Reconnaissance Procurement System
2. Territorial Air Reproduction Photographic System
3. Tactical Air Reconnaissance Pod System
4. Target Arrangement and Reproduction Photo System

3-55. An aerial photograph taken from 1,300 feet is considered to be taken from what altitude?

1. Low
2. Medium
3. High

3-56. What are the three basic categories of aerial photography?

1. Reconnaissance, intelligence, and survey
2. Gunnery exercises, refueling at sea, and publicity
3. Construction progress, accident investigation, and ship identification
4. Vertical, oblique, and air-to-air

3-57. What category of aerial photography is made with the optical axis of the camera lens perpendicular to the ground?

1. Vertical
2. Oblique
3. Air-to-air
4. Reconnaissance

3-58. What category of aerial photography is made with the film plane of the camera parallel to the ground?

1. Oblique
2. Vertical
3. Air-to-air
4. Reconnaissance

3-59. What category of aerial photography is used to provide a uniform scale?

1. Reconnaissance
2. Oblique
3. Air-to-air
4. Vertical